

REMARKS

Claims 1-29 stand rejected in the outstanding Official Action. Claims 19-21 have been cancelled without prejudice and therefore claims 1-18 and 22-29 remain in this application.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page(s) is captioned "**Version With Markings To Show Changes Made.**"

The Examiner's acknowledgment of applicant's claim for priority and receipt of the certified copy of the priority document is very much appreciated.

Claims 2-4, 6-17, 20, 21 and 23 stand objected to because of various formalities. With respect to claims 2-4, 6-17, 20 and 21, the alleged lack of antecedent basis for a "securing device" has been cured by amending independent claims 1 and 5 to recite "a securing device" thereby providing proper antecedent for the term as used in the preamble of claims 2-4 and 6-17. Claims 19-21 have been cancelled without prejudice, thereby obviating the objection to these claims.

The Examiner's objection to claim 8 with reference to "said connecting device" is not understood. Applicant suspects that this was a typographical error and the Examiner intended to refer to claim 18. Applicant has amended claim 18 to delete the word "connecting" with antecedent basis for the phrase "device" specified in line 1 of the claim.

With respect to the use of British and American spellings of the word "fiber," applicant has amended claim 23 to be consistent in the use of the term.

In view of the above amendments, applicant has responded to and obviated all claim objections.

Claims 1, 2, 4, 23 and 24 stand rejected under 35 USC §102(b) as being anticipated by Dambach (U.S. Patent 4,812,003). As previously noted, the Court of Appeals for the Federal Circuit has noted in the case of *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick*, 221 USPQ 481, 485 (Fed. Cir. 1984) that "[a]nticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim."

The Dambach reference contains two optical fibers and not the one optical fiber and at least one optical apparatus recited in claim 1. The Examiner again admits this is "not shown" in the Dambach reference. Thus, as a matter of law, it is clear that every recited element in applicant's independent claim 1 is not present in the Dambach reference.

Additionally, should the Examiner's argument be accepted, i.e. that Dambach's optical fiber 14 is a "photo-element," there is no disclosure of it being mounted on a supporting element (the Examiner admits this is lacking in the Dambach reference by his use of the term "inherent").

Moreover, applicant's claim 1 also specifies that the device include a means for releasably connecting the fiber to the at least one photo-element where a part of the device permits the coupling between the optical fiber and the photo-element to be externally visible. This can clearly be seen in applicant's specification and figures, which allow external inspection of the optical alignment between the optical fiber and the

photo-element. In fact, the Dambach reference specifically discloses that the cable holding element 20 (which is of "clear, transparent, optical grade acrylic plastic or similar material) is mounted in a housing 18 which is "preferably molded integrally as one piece of a suitable plastic material such as opaque, glass filled polyester or the like."

(Column 4, lines 1-4). Thus, it would be impossible to externally view the region of coupling between the fiber and the photo-element inside the securing device due to the opaque housing.

While the Examiner may suggest that optical fiber 14 is used as a "photo-element" and that one fiber is optically coupled to the other fiber by way of reflections from the target area, such is not the relationship specified in applicant's independent claim 1. The Dambach arrangement specifies reflected or diffused light from an optical source to being reflected or diffused into the other optical fiber. This is not the coupling of an optical fiber to an optical apparatus comprising a photo-element. It is noted that applicant's specification clearly indicates that a photo-element is a light emitter or a light detector. Therefore, Dambach clearly fails to disclose or render obvious applicant's claimed construction.

However, in order to more clearly confirm the operational relationship between the elements of applicant's claim, independent claims 1 and 23 have been amended to specify that the optical fiber is in optical alignment with the recited photo-element and that the transparent material makes a region of the optical alignment coupling between the fiber and photo-element externally visible. It is clear that the benefit of applicant's invention is the ability to look and confirm the optical coupling nature of the connection

between the optical fiber and the photo-element, and this has been recited in applicant's independent claims 1 and 23. Inasmuch as Dambach fails to disclose the subject matter of independent claims 1 and 23 or claims 2 and 4 dependent on claim 1 and claim 24 dependent on claim 23, any further rejection under 35 USC §102 over the Dambach reference is respectfully traversed.

Claims 5-7, 9-11, 22 and 26 stand rejected under 35 USC §102 as being anticipated by Yamada (U.S. Patent 4,986,625). Claims 5 and 26 are independent claims, and both claims recite a slide with at least one slot where the slide is movable between first and second predetermined positions and for definition purposes, the claim specifies that the second position is defined by stops. Claims 5 and 26 go on to specify that "said slot, in said second position of said slide, being out of alignment with said hole and exerting on said at least one optical fibre a force which keeps the at least one optical fibre secured in said hold."

The Examiner suggests that Figure 4 in Yamada meets the second position requirements of these independent claims. Figure 4c does indeed show the existence of a retaining plate 20 having a U-shaped slot 22 therein. The Examiner refers to Figure 4c in which he believes the slide is out of alignment with the hole. However, the fiber which is located in hole 13a is shown in dotted outlines as being directly aligned with the slot 22. The sides of the slot 22 bear on the fiber located in hole 13a, keeping the fiber in place.

The position of the elements in Figure 4c is the direct opposite of applicant's claimed structural interrelationship disclosed and recited in claims 5 and 26, i.e. that **in the second position of the slide**, the slot is "out of alignment with said hole."

Accordingly, Yamada cannot disclose or render obvious the subject matter of independent claims 5 and 26 or claims 6, 7, 9-11 and 22 dependent from claim 5. Any further rejection of these claims over Yamada is respectfully traversed.

Claims 5, 8-10, 12 and 28 stand rejected under 35 USC §102 as being anticipated by Welber (U.S. Patent 4,605,280). This rejection is identical to the rejection of claims 5, 8-10 and 12 in the previous Official Action, and the Examiner's attention is directed to the traversal of this rejection contained in applicant's Amendment filed September 12, 2001, at pages 11-13, already of record. It is noted that the Examiner adds a reference to claims 26 and 28 in the first two paragraphs under section 6, but in the preamble of section 6, refers only to claim 28. It is presumed that the Examiner intended to reject claims 5, 8-10, 12, 26 and 28, and the omission in the preamble of section 6 is a typographical error.

It is noted that the Examiner's rejection does not respond to the points raised in applicant's previous Amendment, i.e. that the claimed structure is simply not present in the Welber patent. Moreover, applicant's claims require a slot which is out of alignment with the hole containing the optical fiber and during this out-of-alignment orientation exerts a force on the optical fiber keeping it secured in the hole. In Welber there is no such combination of elements to provide a force locating the optical fiber. Instead, Welber specifically teaches downward opening notch 46 and upward opening notch 64 between which the optical fiber is compressed. The Examiner has failed to point out how or where there is any position of the slide in which there is a hole coaxial with the slot or out-of-alignment with any claimed slot.

Additionally, the Examiner has failed to point out where there is a "stop" defining a **second position** in which the slide is "out of alignment with the hole." Again, without the specific structure recited in applicant's independent claim, Welber cannot anticipate applicant's invention. Any further rejection of claims 5, 8-10, 12 and 28 is respectfully traversed.

Claims 13-17, 19-21, 27 and 29 stand rejected under 35 USC §103 as unpatentable over Welber in view of Kato (U.S. Patent 5,555,333). The above comments with respect to Welber are herein incorporated by reference. Claims 19-21 have been cancelled without prejudice, thereby obviating any further rejection thereunder. Applicant's previously filed amendment clearly responds to the Examiner's prior rejection of claims 13-17 and 21 based upon the Welber/Kato combination. While claims 19-21 have been cancelled without prejudice, the remaining basis for objection to claims 13-17, 27 and 29 is virtually identical to the rejection of claims 13-17 in the previous Official Action. The response to that rejection contained in applicant's Amendment filed September 12, 2001 is herein incorporated by reference and is specifically located in that Amendment in the first full paragraph on page 14 through and including the end of page 15. Because the Examiner makes no new arguments, that previous discussion is herein incorporated by reference and is not specifically duplicated to avoid unnecessary paper in the file history.

Claims 3, 18 and 25 stand rejected under 35 USC §103 as unpatentable over Dambach. Inasmuch as claim 3 depends from claim 1, it has previously been established that Dambach does not disclose the subject matter of claim 1 and therefore cannot

disclose or render obvious the subject matter of claim 3 dependent on claim 1. Claim 18 specifies that the photo-element is mounted on a transparent supporting element and also that the device includes a cover made of a transparent material. The claim also specifies that the combination of these elements results in making a region of coupling between the optical fiber and the photo-element "externally visible." Claim 25 depends from claim 23 which specifies features distinguishing over Dambach similar to those discussed with reference to claim 1. Accordingly, Dambach cannot be construed to disclose or render obvious the combinations of elements specified in applicant's claims 3, 18 and 25 and therefore there is no further basis for a rejection.

The Examiner's sole response to applicant's detailed arguments contained in the Amendment filed September 12, 2001, is a single five-line paragraph in section 10 on page 8 of the Final Rejection. The Examiner's sole argument is a response arguing that with respect to claim 5 (claims 19-21 have been cancelled without prejudice), Welber allegedly teaches "stops." Applicant's claim 5 specifies that the recited slide is movable between first and second predetermined positions, with the second position being defined by "stops." The Examiner suggests that as shown in Figure 3 of Welber, the two arms 66 and 68 and the slide are limited in movement by the housing 50 in its second position. In a very broad sense, this may well be correct.

However, the Examiner apparently ignores the portion of applicant's claim 5 which specifies that in the second position of the slide, i.e. the position in which the slot exerts a retaining force on the optical fiber, applicant's claim requires that the slot be "out of alignment with said hole." As can be seen in Figure 3 and exploded Figure 2, the

optical fiber is in perfect alignment with the hole 38 which is in perfect alignment with the upper and lower portions defining the slot. In fact, the light conducting glass disk 52 mounted in recess 69 is coaxially aligned with both the notch (designated a "slot" by the Examiner), hole 38 and optical fiber 86. Thus Welber, not only fails to disclose the claimed arrangement, but specifically "teaches away" from the claimed invention.

Accordingly, the Examiner's sole response to applicant's detailed arguments in the September 12, 2001 Amendment clearly distinguishing the claimed invention from all cited prior art is itself an acknowledgment that the cited Welber reference is not applicable to applicant's invention because it teaches precisely the opposite interrelationship of elements from that recited in applicant's independent claim 5.

Applicant submits this clarifying amendment with respect to the relationship among components recited in applicant's independent claims in the form of a Request for Continuing Examination in order to place this application in final condition for allowance. Should the Examiner persist in rejecting claims, he is specifically requested to point out the structures in the cited prior art which correspond to each recited element in each rejected claim in order that applicant may provide a more detailed rebuttal to the Examiner's position.

As noted previously, the prior art does not recognize the problem solved by applicant's invention (the problem of aligning optical fibers with photo-elements easily and quickly in a releasable connector), nor does it disclose the structures or structural interrelationships which are recited in applicant's claims. The burden of establishing a *prima facie* rejection under 35 USC §103 requires that the Examiner establish where

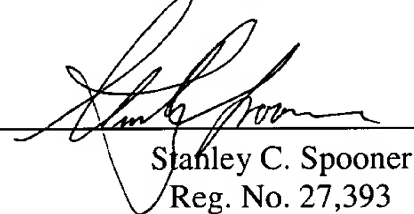
there is a disclosure of the claimed elements and interrelationship of elements and also indicate how or why one of ordinary skill in the art would pick and choose those elements and interrelationships from among the various references. How or why the Examiner believes there to be any suggestion of these structures or these interrelationships or any motivation for combining the same is not seen and clarification is respectfully requested.

Having responded to all objections and rejections set forth in the outstanding Official Action, it is submitted that claims 1-18 and 22-29 are in condition for allowance and notice to that effect is respectfully solicited. In the event the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of one or more of the above claims, he is respectfully requested to contact applicant's undersigned representative.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Claim 1 (*Thrice Amended*) A securing device for releasably connecting at least one optical fibre to an optical apparatus where said optical apparatus comprises at least one photo-element mounted on a supporting element, said device including means for releasably connecting said at least one optical fibre in optical alignment with [to] said at least one photo-element, wherein at least a part of said device is made from a transparent material making a region of optical alignment in coupling between the at least one optical fibre and the at least one photo-element externally visible.

Claim 5 (*Thrice Amended*) [Device] A securing device for connecting at least one optical fibre to an optical apparatus, said optical apparatus comprising at least one photo-element, said at least one optical fibre connectable to said at least one photo-element, and at least one supporting element provided with at least one guide hole for said at least one optical fibre, wherein said device comprises

a slide provided with at least one slot, said slide moveable between a first and a second predetermined position, said second position being defined by stops, said slot, in said first position of said slide, being coaxial with said hole of said supporting element and freely housing said at least one optical fibre, and said slot, in said second position of said slide, being out of alignment with said hole and exerting on said at least one optical fibre a force which keeps the at least one optical fibre secured in said hole.

Claim 14 (*Twice amended*) [Securing device according to claim 5] A securing device for connecting at least one optical fibre to an optical apparatus, said optical apparatus comprising at least one photo-element, said at least one optical fibre connectable to said at least one photo-element, and at least one supporting element provided with at least one guide hole for said at least one optical fibre, wherein said device comprises

a slide provided with at least one slot, said slide moveable between a first and a second predetermined position, said second position being defined by stops, said slot, in said first position of said slide, being coaxial with said hole of said supporting element and freely housing said at least one optical fibre, and said slot, in said second position of said slide, being out of alignment with said hole and exerting on said at least one optical fibre a force which keeps the at least one optical fibre secured in said hole, wherein said slide is made from transparent material.

Claim 18. (*Twice Amended*) Device for releasably connecting at least one optical fibre to an optical apparatus, said optical apparatus comprising at least one photo-element mounted on a transparent supporting element , said device including means for releasably connecting said at least one optical fibre to said at least one photo-element, wherein said [connecting] device includes a cover made of a transparent material making a region of coupling between said at least one optical fibre and the photo-element externally visible.

23. (*Amended*) Optical equipment comprising:

an optical apparatus comprising at least one photo-element,

at least one optical fiber, and

a device for releasably connecting said at least one optical [fibre] fiber in optical alignment with [to] a respective one of said at least one photo-element,

wherein at least a part of said releasably connecting device is made from a transparent material in order to make a region of optical alignment in coupling between the at least one optical [fibre] fiber and the at least one photo-element externally visible.

27. (Amended) Optical equipment [according to claim 26] comprising:

at least one optical fiber,

an optical apparatus comprising at least one photo-element, and a supporting element provided with at least one guide hole for a respective one of said at least one optical fibre, and

a device for connecting said at least one optical fibre to a respective one of said at least one photo-element,

wherein said connecting device comprises a slide provided with at least one slot, said slide being movable between a first and a second predetermined position, said second predetermined position being defined by stops, said at least one slot, in said first position of said slide, being coaxial with said at least one hole of said supporting element and freely housing said at least one optical fibre, and said at least one slot, in said second position of said slide, being out of alignment with said at least one hole and exerting on said at least one optical fibre a force which keeps said at least one optical fibre secured in said at least one hole, wherein said slide is made from transparent material.